

We Claim:

1. A method of logging computer errors in a computer system, comprising, at a firmware level of the computer system:
 - receiving an error notification;
 - collecting a plurality of outstanding error events;
 - arranging the plurality of outstanding error events as a variable-length error record; and
 - storing the error record in a non-volatile memory.
2. The method of claim 1, wherein the error events are collected from a plurality of peripheral devices within the scope of a processor domain.
3. The method of claim 1, wherein the error notification is a hardware interrupt.
4. The method of claim 1, wherein the error notification is a software polling operation.
5. The method of claim 1, wherein the collecting includes:
 - interrogating peripheral devices for status information; and
 - filtering error events from the status information.
6. A method of handling a computer error at a firmware level, comprising:
 - gathering information about a plurality of error events;
 - formatting the gathered information as an error record; and
 - storing the error record in a memory.
7. The method of claim 6, wherein the memory is a non-volatile storage medium.
8. The method of claim 6, wherein the error record comprises:
 - a record header delineating the beginning of the error record; and
 - a variable number of sections, each section having a section header and a variable-length section body;wherein each section corresponds to one of the plurality of error events.

9. The method of claim 8, wherein the record header includes:
a monotonically increasing record identifier;
a revision number;
an error severity value;
a time stamp; and
a record length.
10. The method of claim 8, wherein the section header includes:
a global unique identifier corresponding to a specific device; and
a section length field containing the length of the section.
11. The method of claim 6, wherein the gathering includes:
polling peripheral devices for status information; and
filtering error events from the status information.
12. The method of claim 6, wherein the storing includes marking the error record as unconsumed.
13. The method of claim 6, further comprising: retrieving the error record upon request.
14. The method of claim 13, wherein the retrieving includes publishing the error record to a requesting operating system.
15. The method of claim 13, wherein the retrieving includes marking the error record as consumed.
16. The method of claim 15, further comprising freeing for reuse the memory associated with the consumed error record.
17. A machine-readable medium having stored thereon executable instructions that when executed by a processor, cause the processor to log computer errors at a firmware level by:
receiving an error notification;
gathering information about a plurality of outstanding error events;
formatting the gathered information as a variable-length error record;

storing the error record in a memory; and
when requested, outputting the error record to an agent.

18. The machine-readable medium of claim 17, wherein the variable-length error record has a format, comprising:
 - a record header delineating the beginning of the error record; and
 - a variable number of sections, each section having a section header and a variable-length section body;wherein each section corresponds to one of the plurality of error events.
19. The machine-readable medium of claim 17, wherein the storing includes marking the error record as unconsumed.
20. The machine-readable medium of claim 17, wherein the outputting includes marking the error record as consumed.
21. The machine-readable medium of claim 17, wherein the memory is a non-volatile storage medium.

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